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A REGIONAL REVIEW OF STRUCTURAL, SOCIAL AND ECONOMIC TRENDS

Tri-State Regional Planning Commission
CONNECTICUT • NEW JERSEY • NEW YORK

JULY 1978

The Tri-State Regional Planning Commission is an interstate agency that defines and seeks solutions to immediate and long-range problems in the development of land, housing, transportation and other public facilities in the New York metropolitan region covering 21 counties in New York and New Jersey and six planning regions in southwest Connecticut.

Established by legislative action of the states of Connecticut, New Jersey and New York in 1971, the Commission succeeds the Tri-State Transportation Commission formed by the legislatures of these states in 1965.

Recognized by the federal government as the official planning agency for the Tri-State Region, the Commission also supports subregional and local planning. It provides assistance in solving problems that transcend local jurisdiction. It also encourages coordination among all agencies charged with an interest in planning or providing transportation and other federally aided facilities within the Tri-State Region.

The three states and the federal government finance the work of the Commission. Federal funds come from aviation, highway and mass-transportation planning and testing grants provided by the Department of Transportation, and also from planning grants provided by the Department of Housing and Urban Development. Commissioners representing the three states are appointed by the governors in accordance with the laws of their respective states. Federal representatives are appointed by the appropriate officer holding such authority within the Executive Branch.

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TRI-STATE REGIONAL PLANNING COMMISSION

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A REGIONAL REVIEW OF STRUCTURAL, SOCIAL AND ECONOMIC TRENDS

HOLDING STEADY IN THE LATE '70s

There are few changes in the vital signs of the Tri-State Region during the late 1970s. In fact, 1977 could be termed "the year the Region kept going."

Those economic and social indicators that have been on the increase generally stayed that way, as did most of those that have been decreasing. Levelled-off indices stayed in their static condition.

Only in the area of housing is there a slight reversal of trends in progress, with permits to build both single-family houses and multi-family apartments on the increase after three years of fall-offs.

In retrospect, the Region appears to have hit a peak year for employment in 1969, followed by a high-water mark for other

measures in the 1972-1973 period. In that biennium, for example, population reached its peak, total housing production was the highest of the decade, and electric energy consumption was at its highest. More goods were moved in that period than the few years earlier or since, and public school enrollment reached a high of 3.49 million in 1972.

Other decreases in regional indices since the 1972-73 highs include: steadily fewer motor vehicle fatalities; substantial declines in air pollutants, especially particulates and sulfur dioxide; less sewage; and slightly less solid waste.

Of special significance to the Tri-State Region at this time in its history is the condition of its older cities, particularly its larger ones. New York City, Newark, Jersey City and Yonkers together contain nearly half the Region's population. A few years ago, they contained considerably more than half the regional population and jobs, but the losses sustained by them—particularly New York City—up to now have reflected a desire of many residents to live a suburban existence. We believe that a similar trend exists for the next largest group of cities, such as Bridgeport, Paterson and White Plains, which will be confirmed when data for those places are compiled.

This loss in population has had an effect on the cities' housing stock. Demolitions and other losses of houses and apartments are now exceeding the construction of new units, so that, as this report shows, the four largest cities have had a net loss of nearly 20,000 units as a result of the last two years' activity.

If this trend continues, the Region's older cities could lose more than a million people during the next 25 years. Also, jobs would continue to decline as businesses move either to outlying sectors of the area, or, more probably, out of the Region altogether. The Commission views this as an undesirable trend that should be resisted, and its plans seek to bend these trends.

This is the Commission's monitoring report for 1978, which generally deals with ten-year trends ending in 1977. The Commission must base its planning work on such long-term trends, not year-to-year fluctuations. When no date is mentioned in the following text the reader can assume that the information pertains to 1977. These are only summaries of detailed studies and compiled statistics, many of which are available at a county or planning region level. Interested readers are reminded that such additional statistics are available at the Commission's offices and at Connecticut regional planning agencies and New York and New Jersey county planning boards. In the interest of the nation's long-term goal to convert to the metric system, many of the tables are listed in both metric and conventional forms. Several items in the tables are shown as estimated, but readers should be advised that *all* figures are subject to change as new information becomes available.

Jobs and People

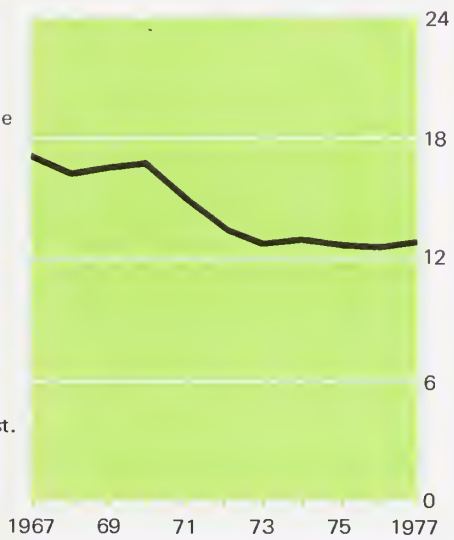
An estimated loss of 10,000 jobs during 1977, if confirmed by analysis of additional data to be received, represents one of the smallest annual losses for the Region since employment began its descent from a regional high of 8.41 million jobs in 1969. In the previous losing years of the seventies, job decreases were frequently on the order of 100,000 or more (1973 stands out as a year of contrast, when 90,000 jobs were gained). The small loss of .1 percent in 1977 could be a sign that employment is becoming stable.

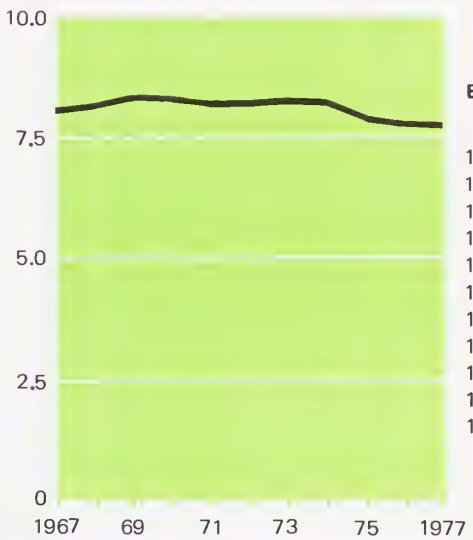
An easing of regional unemployment is indicated by the data of the last two years. Obviously, this cannot result from more people being at work, if estimated job losses are confirmed. Instead, some unemployed have simply withdrawn from the labor force by ceasing to look for work, and the number of potential workers has been reduced by those leaving the Region to live and find work elsewhere.

Indeed, migration from the Region is the principal cause of a loss of 200,000 people since 1972. The actual amount of migration has been even greater, but natural increases during most of these years have tended to hold down the net loss. Were the Region's birth rate higher, net loss in population would be lower, but the current life-style of our society means fewer offspring than the style of the 1950s and 1960s. This is illustrated by declining school enrollments

BIRTH RATE
per thousand people

1967	17.0
1968	16.3
1969	16.7
1970	16.8
1971	15.0
1972	13.3
1973	12.6
1974	12.8
1975	12.5
1976	12.4
1977	12.6 est.



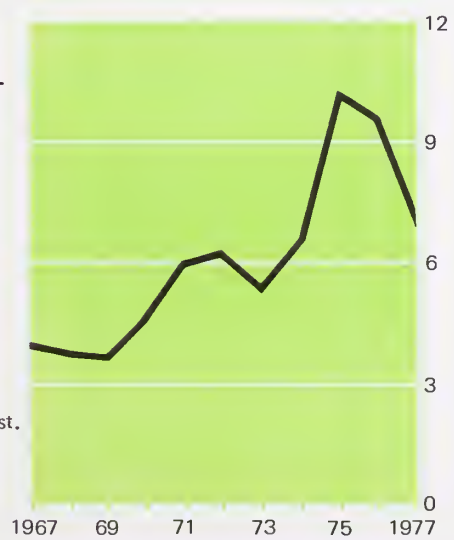


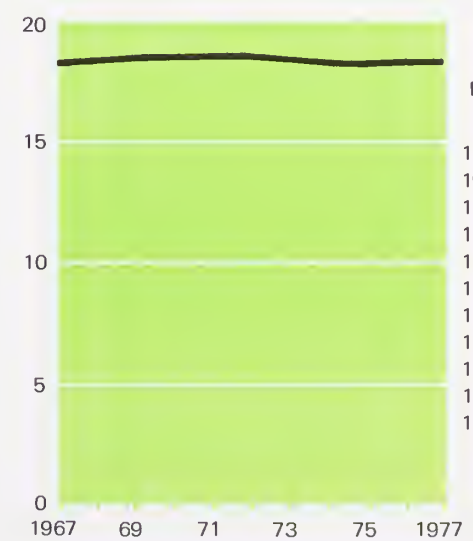
EMPLOYMENT
millions

1967	8.02
1968	8.17
1969	8.41
1970	8.40
1971	8.19
1972	8.21
1973	8.30
1974	8.24
1975	7.90
1976	7.80
1977	7.79 est.

UNEMPLOYMENT
percent

1967	3.9
1968	3.7
1969	3.6
1970	4.5
1971	6.0
1972	6.1
1973	5.3
1974	6.5
1975	10.2
1976	9.5
1977	7.1 est.





POPULATION
millions

1967	18.20
1968	18.40
1969	18.55
1970	18.73
1971	18.84
1972	18.84
1973	18.74
1974	18.66
1975	18.62
1976	18.64
1977	18.64 est.

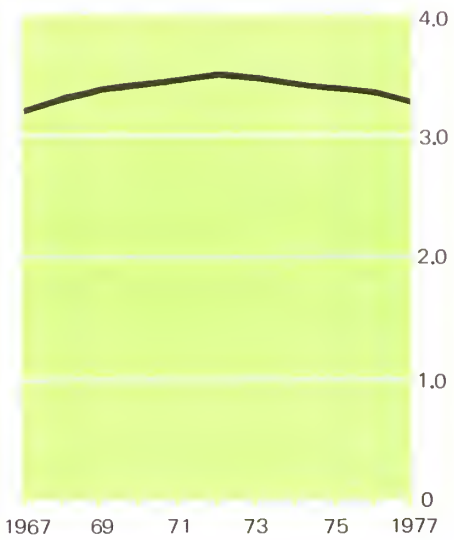
as well as general population losses. With a 230,000 drop in the public school population since 1972, the Region has been going through a shrinkage in its school plant. Some elementary schools in particular have been closed or converted to other public uses, such as town halls or libraries.

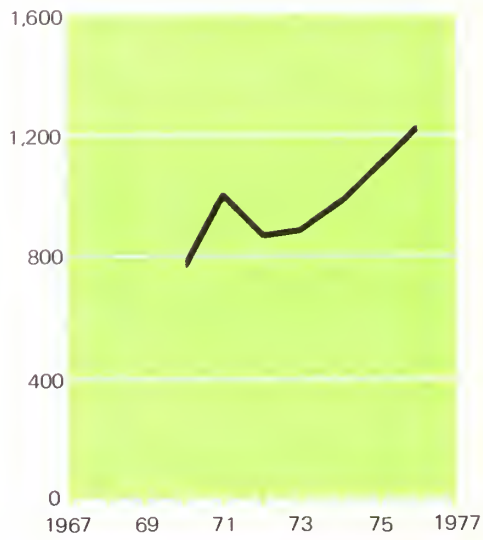
The decrease in public school enrollment for the lower grades is not limited to selected places in the metropolitan area. Every one of the 27 subregional parts has experienced a loss, even though many have registered total population increases. Some of the subregions have also begun to feel decreases in enrollment at secondary-school levels, and this can be expected to occur in the remaining subregions during the next few years. A distinct reversal in the current low birth rate or a large proportion of the population entering the child-bearing age could cause school enrollments to level off. A less likely but still possible contributor to enrollment would be migration into the Region.

Criminal activity within the Region, according to police reports to the federal government, increased during each of the four years between 1972 and 1976, the latter year being the most recent for which data are available. Thus, the distinct drop in crime that occurred in 1972 has been more than eclipsed. Most of the decrease in that year was attributable to fewer property crimes being reported. Characteristically, property crime represents about 80 percent of all

PUBLIC SCHOOL ENROLLMENT
millions

1967	3.19
1968	3.29
1969	3.36
1970	3.42
1971	3.47
1972	3.49
1973	3.46
1974	3.41
1975	3.38
1976	3.34
1977	3.26



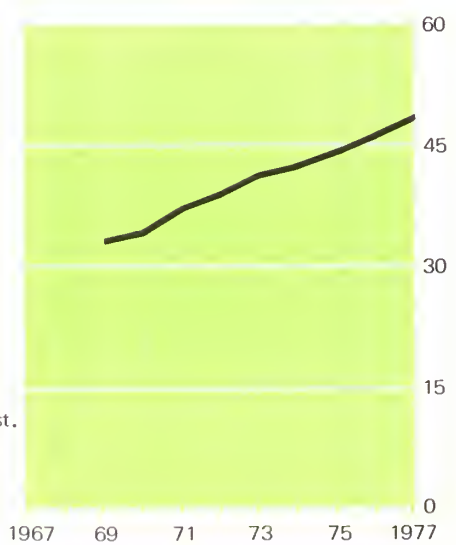


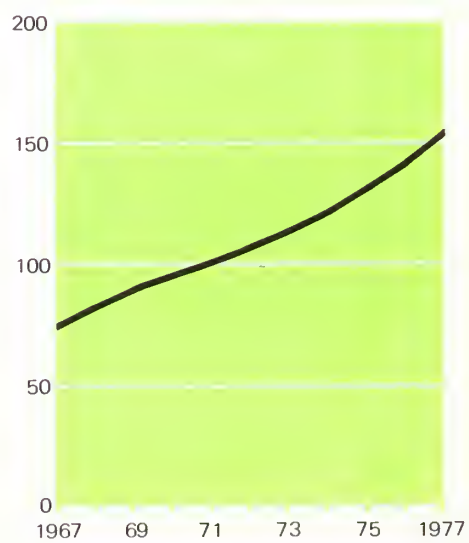
CRIME
Commonly Reported Offenses
thousands

1970	794.2
1971	1,004.8
1972	866.5
1973	882.6
1974	992.3
1975	1,111.0
1976	1,222.0

RETAIL TRADE SALES
billions

1969	$32.7
1970	33.3
1971	36.8
1972	38.5
1973	40.9
1974	42.2
1975	43.6
1976	45.9
1977	48.0 est.





PERSONAL INCOME
billions

1967	$75.7
1968	82.8
1969	89.5
1970	95.6
1971	101.0
1972	107.1
1973	113.9
1974	122.8
1975	131.8
1976	142.0
1977	152.0 est.

reported offenses in this Region, the remainder being violent crime.

Income and Spending

Income and spending is one area of activity that has been increasing without abatement during the last ten years. Every indicator measured by the Commission is up: total personal income; median household income; retail sales; and total receipts and expenditures of local government.

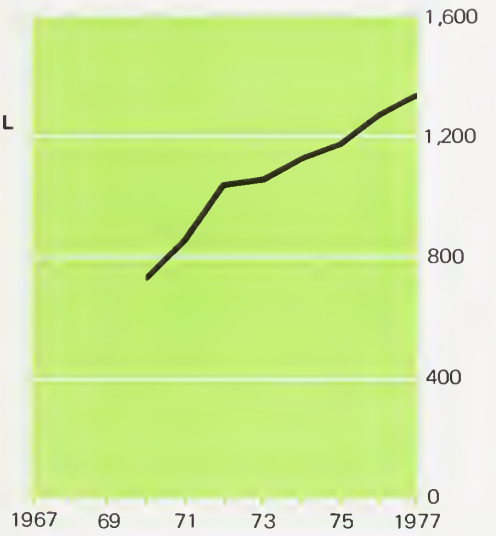
Of course, each of these is an absolute increase, and the increase of 86 percent in consumer prices during the same period gives changed meaning to the others in terms of purchasing power or monetary gain. Thus, household income, which increased 81 percent, did not keep up with prices, although total personal income, at 101 percent, exceeded price rises.

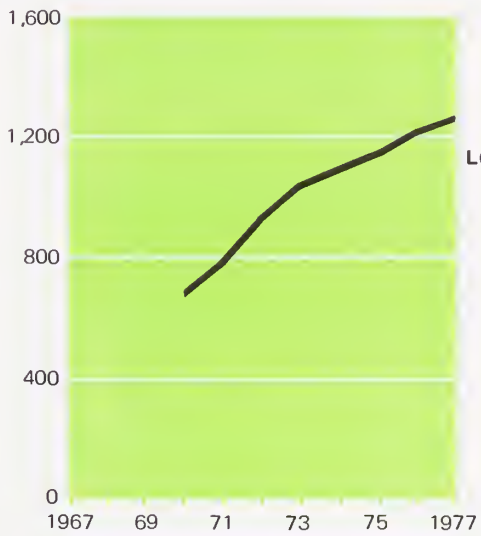
Similarly, retail sales rose by 47 percent between 1969 and 1977; but with an increase in inflation, as measured by the price index, of 68 percent during the same eight-year period, real retail sales actually shrank by 13 percent. And on the surface, it looks as though spending by local government has nearly doubled since 1970. In fact the level of spending did go up by 82 percent, but the inflationary rise in prices of 56 percent held real local expenditures to a 17 percent increase.

Expenditures of local governments have consistently been running ahead of revenues

PER CAPITA TOTAL EXPENDITURES OF LOCAL GOVERNMENTS
dollars

1970	$726
1971	856
1972	1,029
1973	1,040
1974	1,121
1975	1,175
1976	1,250
1977	1,320 est.



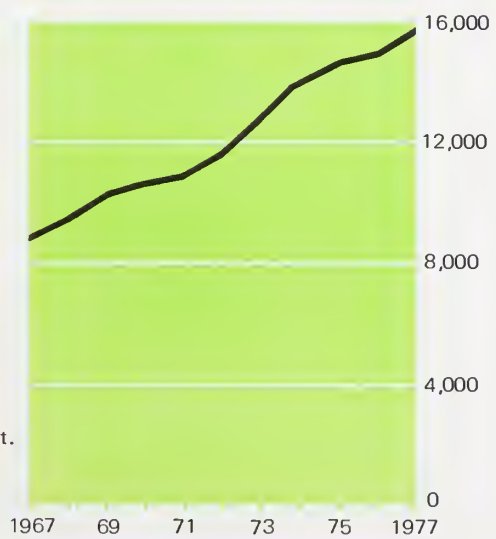


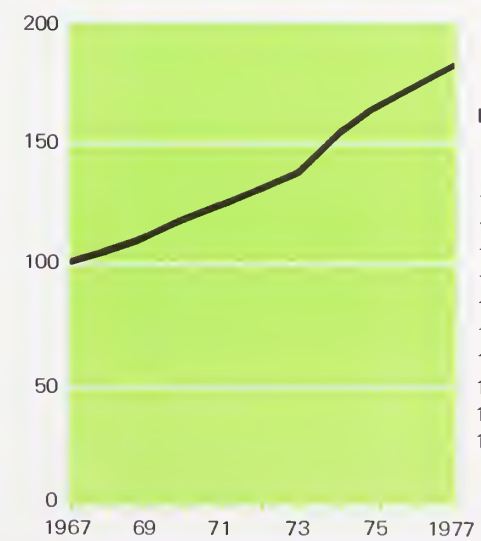
PER CAPITA TOTAL REVENUE of LOCAL GOVERNMENTS
dollars

1970	$690
1971	794
1972	923
1973	1,034
1974	1,092
1975	1,150
1976	1,210
1977	1,255 est.

HOUSEHOLD INCOME
median

1967	$8,720
1968	9,380
1969	10,100
1970	10,600
1971	10,800
1972	11,700
1973	12,700
1974	13,800
1975	14,600
1976	14,900
1977	15,800 est.





CONSUMER PRICE INDEX
1967 = 100.0

1967	100.0
1968	104.3
1969	110.8
1970	119.0
1971	125.9
1972	131.4
1973	139.7
1974	154.7
1975	166.6
1976	176.3
1977	186.0 est.

because of borrowing, with governments in this Region carrying one-third more than the average outstanding debt of local governments nationwide. In general the major spending category in the Region is education, which accounts for 30 percent. Public welfare is second, with 15-20 percent, and health and hospital expenditures are third.

Land Development and Housing

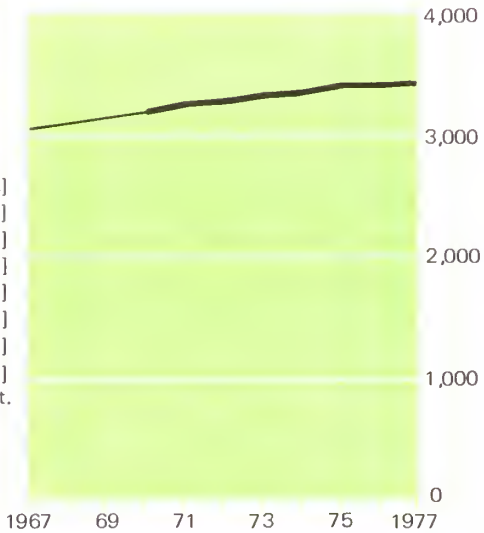
The rate of increase in the Region's developed land has hovered near 30 square miles annually since 1970. In the last two years the increase has dropped ever so slightly to about 25 square miles a year. Further decreases in the rate will be essential if a major objective of the Commission's regional plan—concentrate development to revitalize older cities and to economize on space, time, energy and existing public services—is to be achieved. Otherwise, the effect could be to reduce population in the centers of the Region even more than now, thus making poor use of an immense existing investment in public services and probably causing much critical land, such as agricultural areas, flood plains and watersheds, to be built upon.

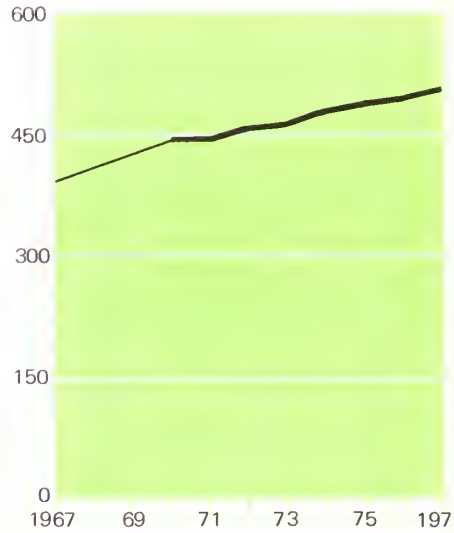
Reinforcement for retention of critical lands in their natural state comes from the reservation of many such lands as recreational open space. The increase in open-space land has averaged about two percent each year.

The construction of housing, as expressed in municipal authorizations to build, is the

DEVELOPED LAND
square miles
[square kilometers]

1970	3,202	[8,293]
1971	3,234	[8,376]
1972	3,266	[8,459]
1973	3,299	[8,544]
1974	3,326	[8,614]
1975	3,360	[8,702]
1976	3,384	[8,765]
1977	3,409	[8,829] est.



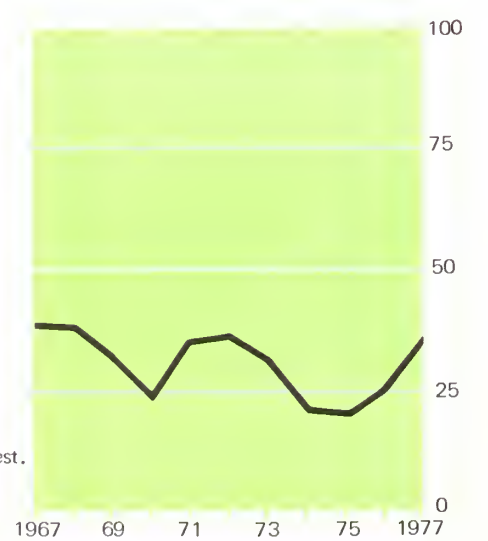


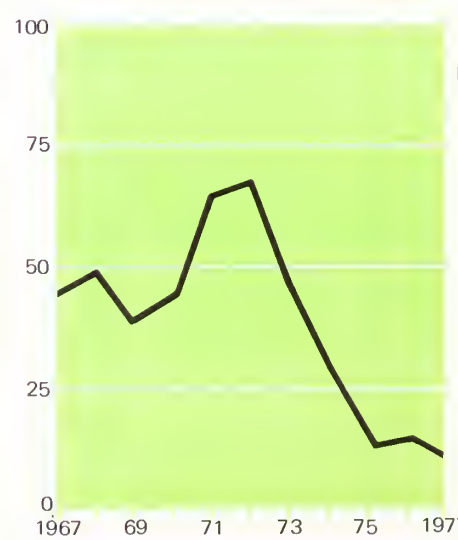
RECREATIONAL OPEN-SPACE ACRES [HECTARES]
thousands

1970	443.7	[179.6]
1971	450.7	[182.4]
1972	460.9	[186.5]
1973	466.2	[188.7]
1974	473.8	[191.7]
1975	485.3	[196.4]
1976	495.0	[200.3]
1977	504.0	[203.9] est.

SINGLE-FAMILY HOUSING-UNIT PERMITS
thousands

1967	37.8
1968	37.1
1969	32.2
1970	24.9
1971	34.5
1972	35.2
1973	31.8
1974	21.0
1975	20.7
1976	25.1
1977	35.0 est.





MULTIFAMILY (2+) HOUSING-UNIT PERMITS
thousands

1967	45.6
1968	48.7
1969	38.6
1970	43.9
1971	64.1
1972	66.1
1973	46.8
1974	27.9
1975	12.0
1976	12.7
1977	10.0 est.

one area of regional action where a turnaround occurred in 1976 and 1977 after three consecutive years of decreasing authorizations. The increase in both single-family and multifamily building, however, does not bring the regional annual rate to the level that the Commission deems necessary for meeting the housing needs of its people. To accomplish this, enough construction would have to be authorized to cause a net increase, after accounting for losses, of 64,000 units a year—six times the 10,000 added in 1977.

The construction of housing is also an area where the Region's four largest cities—New York, Newark, Jersey City and Yonkers—stand in contrast to the metropolitan area as a whole.

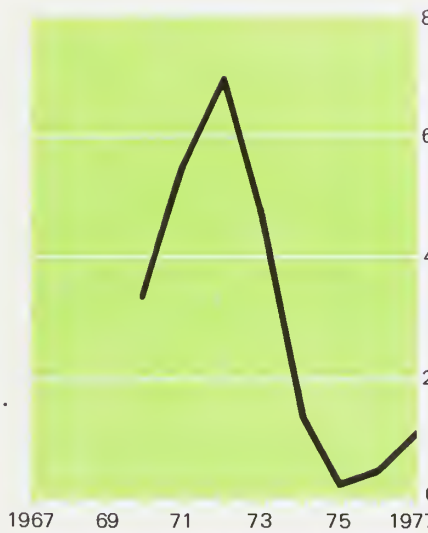
While authorizations in the cities held steady in 1976 (the year of latest available data) the level is far beneath the scale required for the cities to retain, much less increase, their populations and jobs. Worse, the steady loss of dwellings because of fires, demolitions and other reasons is not being made up by the construction of new units. Thus, the large cities lost 19,000 dwellings in 1975-76, while the regional whole was gaining 5,200 houses and apartments.

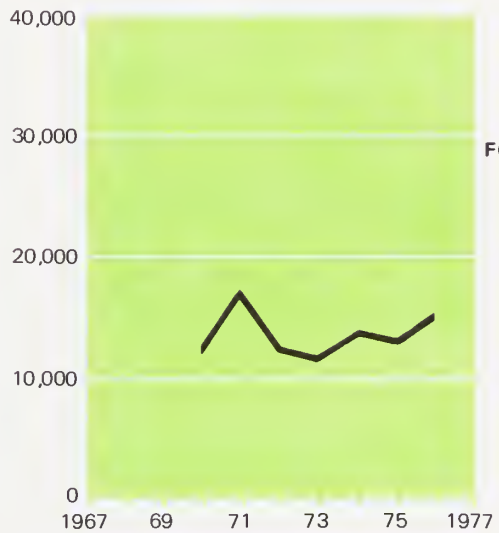
Private and Public Transportation

The Tri-State Region is inhabited by people who travel a great deal, and their propensity to travel is greater than ever. Not only is the total amount of trips within the

NET HOUSING CHANGE
thousands

1970	36.9
1971	55.6
1972	68.6
1973	46.7
1974	14.4
1975	1.5
1976	3.7
1977	10.0 est.



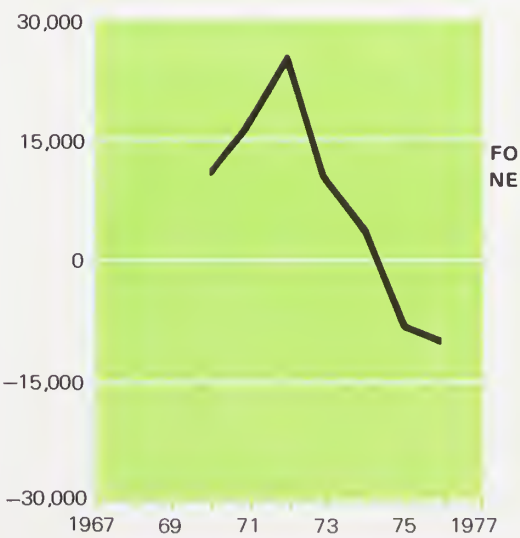


FOUR LARGEST CITIES' HOUSING LOSSES

1970	12,360
1971	16,991
1972	12,038
1973	11,402
1974	13,311
1975	12,637
1976	14,966

FOUR LARGEST CITIES' HOUSING-UNIT PERMITS

1970	23,418
1971	32,515
1972	36,413
1973	21,441
1974	16,776
1975	4,449
1976	4,449



FOUR LARGEST CITIES' NET HOUSING CHANGE

1970	11,058
1971	16,524
1972	25,375
1973	10,039
1974	3,465
1975	– 8,589
1976	−10,517

Region nearly 40 million on the average weekday, but trips per person now average slightly more than two per day; ten years ago the average was slightly less than two.

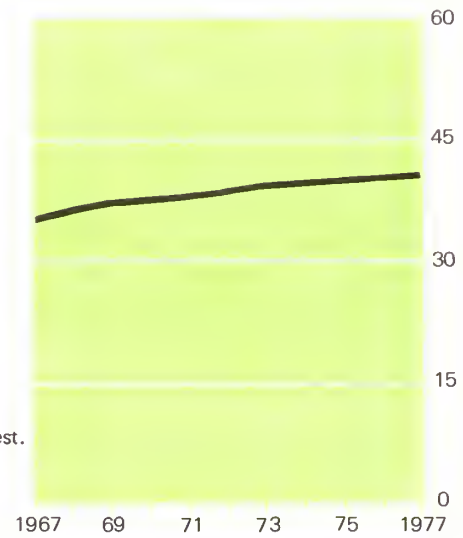
The additional 5.2 million daily trips being taken in 1977 that were not made in 1967 are being borne entirely in private vehicles. In fact, the Region has become even more auto-reliant than this number would indicate, since the use of public mass-transportation has declined considerably during the same period. (Travel on school buses has become stable.)

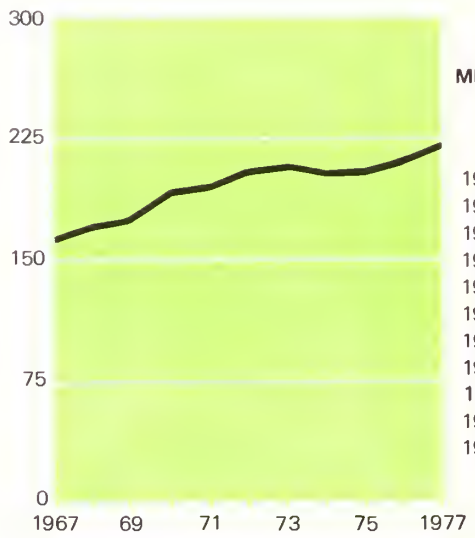
All appurtenances of vehicular travel confirm this: increases in registered motor vehicles and in limited-access highways, which carry one-third of the vehicular travel; and similar increases in total miles traveled by vehicles each day and in gasoline sales except for the "hesitation" caused by the fuel shortage of 1974.

The public sector bears little responsibility for the purchase and use of motor vehicles or for the purchase of fuels to operate them. However, the provision of roadways has and continues to be matter of public concern. Ever since America's first limited-access parkway was constructed in the Tri-State Region more than 50 years ago, there has been a steady addition to our total route mileage of these expressways over the years. During the last dozen years, 455 miles of such highways have been built—an average of 33.7 miles per year. Lately, however, there has

DAILY PERSON TRIPS
millions

1967	34.7
1968	35.5
1969	36.2
1970	36.9
1971	37.5
1972	37.8
1973	38.6
1974	39.1
1975	39.4
1976	39.6
1977	39.9 est.



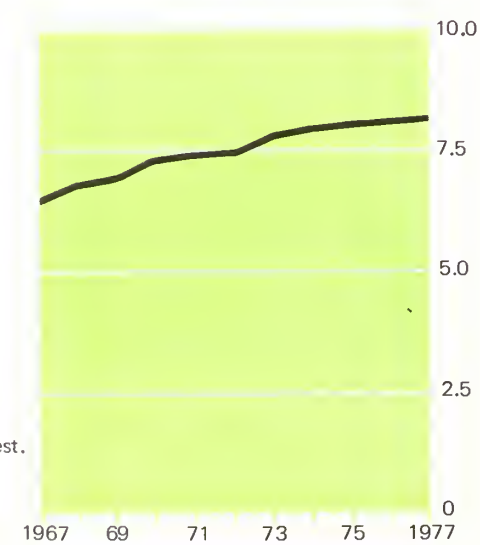


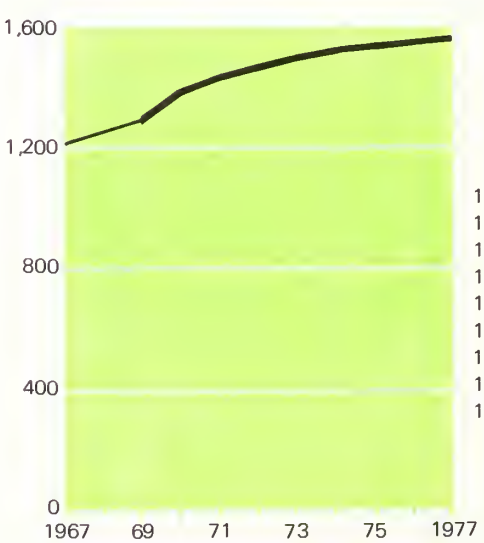
DAILY VEHICLE MILES [KILOMETERS] of TRAVEL
millions

1967	161.3	[259.6]
1968	168.3	[270.8]
1969	172.7	[277.9]
1970	189.2	[304.5]
1971	195.9	[315.3]
1972	203.3	[327.2]
1973	208.9	[336.2]
1974	203.4	[327.3]
1975	207.8	[334.4]
1976	212.1	[341.3]
1977	220.5	[354.8] est.

VEHICLES REGISTERED
millions

1967	6.30
1968	6.55
1969	6.78
1970	7.08
1971	7.26
1972	7.37
1973	7.66
1974	7.83
1975	7.93
1976	7.97
1977	8.05 est.





LIMITED-ACCESS HIGHWAYS
miles [kilometers]

1969	1,272	[2,047]
1970	1,374	[2,211]
1971	1,413	[2,774]
1972	1,449	[2,332]
1973	1,487	[2,393]
1974	1,512	[2,433]
1975	1,523	[2,451]
1976	1,531	[2,463]
1977	1,540	[2,478] est.

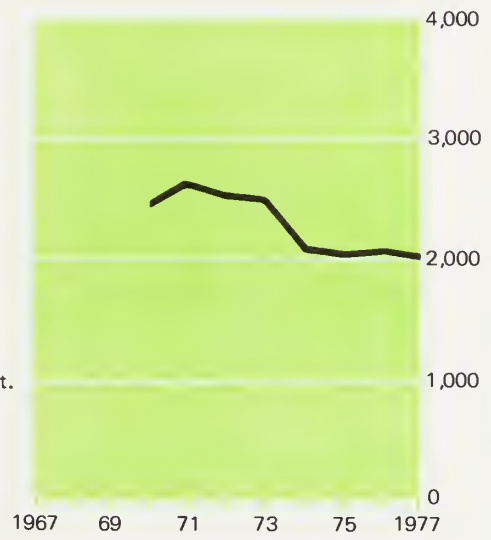
been a declining rate of construction: 38 miles in 1973, 35 in 1974, 11 in 1975, 8 in 1976 and 9 in 1977. The Region's governments have programmed an average of 6.7 miles annually for the next five years. As of 1976, the supply of freeways, relative to the number of registered vehicles in the Region, remains at approximately 2 miles of freeways for each 10,000 vehicles—the same as it was in 1964.

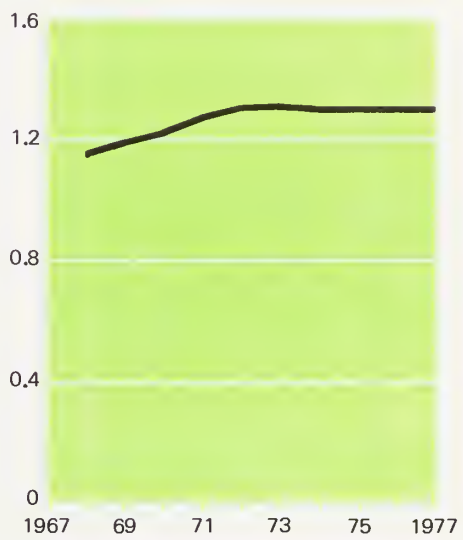
A welcome contrast to the Region's increasing reliance on private vehicles for trip-making is the reduction in motor vehicle fatalities. The big reduction occurred in 1974 when speed limits were lowered to 55 miles per hour, principally as a fuel-saving measure. Yet the salutary effect of this federal action as a life-saving measure is still being realized despite more vehicles on the roads, traveling more miles than ever before.

Insofar as the drop in travel by public transportation is concerned, the decline of employment and population in the Region's older cities—where the great bulk of such transportation exists—is a direct cause. Further decreases in trips by public transport are assured as long as these "job and people" losses continue. Such trends are obviously of concern in light of recent capital investment in public transport equipment—an investment that, quite significantly, has reduced overaged (more than 30 years old) rail and subway cars by 53 percent and overaged buses by 17 percent in the last five years alone. Aside from

MOTOR VEHICLE FATALITIES

1970	2,453
1971	2,632
1972	2,551
1973	2,501
1974	2,048
1975	2,017
1976	2,022
1977	2,000 est.



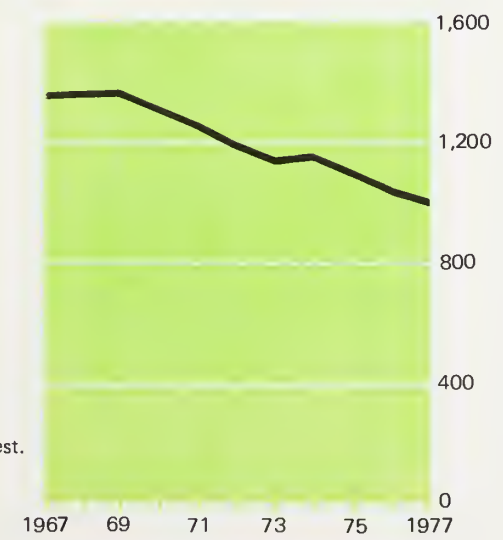


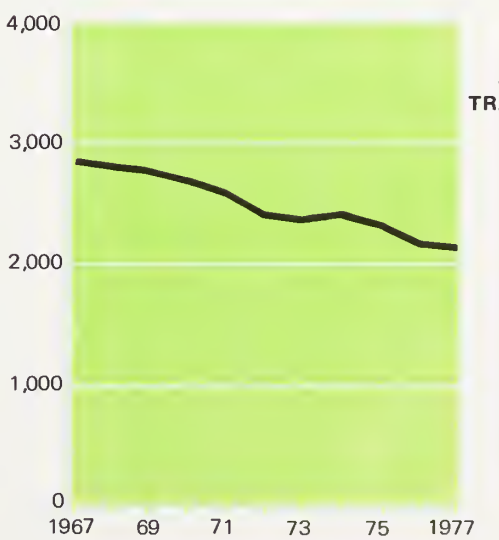
STUDENTS TRANSPORTED By School Bus
millions

1968	1.15
1969	1.19
1970	1.21
1971	1.26
1972	1.28
1973	1.29
1974	1.27
1975	1.27
1976	1.27
1977	1.27 est.

ANNUAL RAPID TRANSIT PATRONAGE
millions

1967	1,340
1968	1,343
1969	1,351
1970	1,306
1971	1,244
1972	1,192
1973	1,138
1974	1,145
1975	1,099
1976	1,058
1977	1,047 est.





ANNUAL PUBLIC TRANSIT PATRONAGE
millions

1967	2,872
1968	2,834
1969	2,810
1970	2,711
1971	2,606
1972	2,411
1973	2,348
1974	2,415
1975	2,322
1976	2,177
1977	2,159 est.

providing their transit riders better equipment as the years go by, the Region's public transportation operators have generally reduced service mildly in response to declines in patronage. While ridership has dropped 10 percent in the last five years, service, in terms of total seats supplied on operating rail-transit cars and buses, has dropped three percent.

Travel by air in 1977 is estimated to have exceeded the level that existed prior to the economic recession that hit the nation and this Region in the mid-1970s. Because one out of two trips by air to and from the Region are made for business reasons, the use of air transportation is especially sensitive to economic conditions.

Registered private aircraft have been steadily increasing since 1973, now surpassing the peak year of 1972; thus, the Region can expect a continued need for improved general aviation airports, as these types of aircraft account for far more take-offs and landings than do the commercial aircraft.

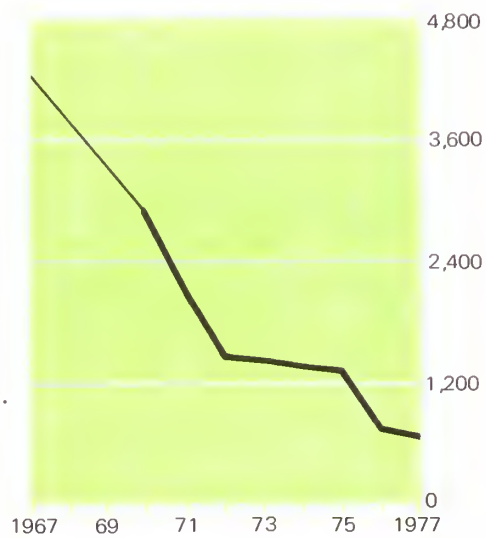
Matter and Energy

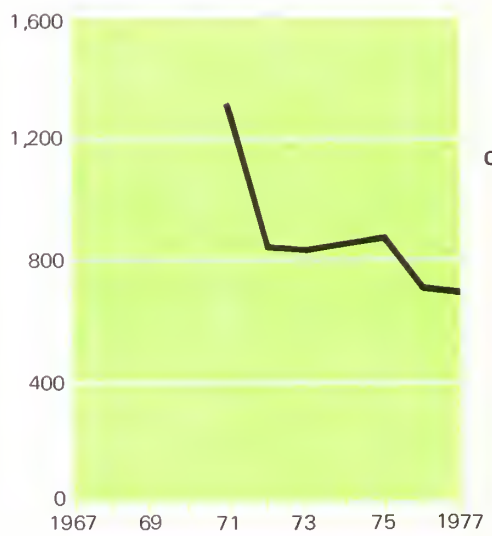
Carrying out the business of living means that a huge amount of material must be transported, consumed or discarded by the residents of the Tri-State Region. This includes the broad essentials that are needed or generated by all industrial states: fuel and electricity, goods, water, sewage and garbage.

Because fuel usage in the form of gaso-

OVERAGE RAIL-TRANSIT CARS

1970	2,883
1971	2,116
1972	1,461
1973	1,417
1974	1,370
1975	1,323
1976	723
1977	675 est.



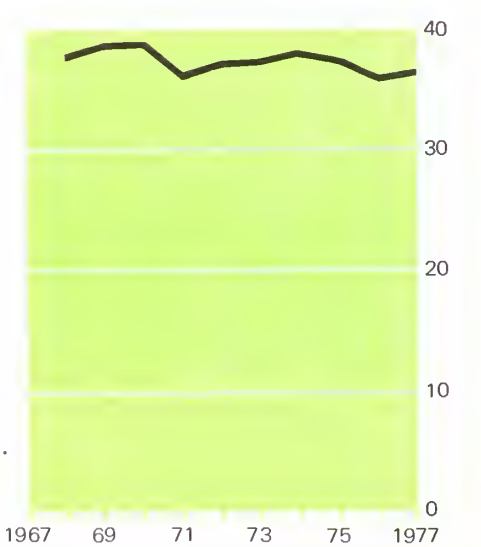


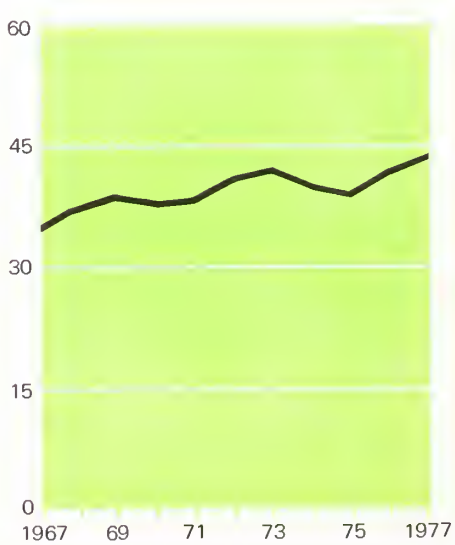
OVERAGE BUSES

1971	1,301
1972	822
1973	816
1974	846
1975	861
1976	712
1977	700 est.

ANNUAL PUBLIC TRANSIT SEAT-MILES
billions

1968	38.15
1969	38.78
1970	38.99
1971	36.29
1972	37.58
1973	37.49
1974	38.11
1975	37.61
1976	36.13
1977	36.32 est.





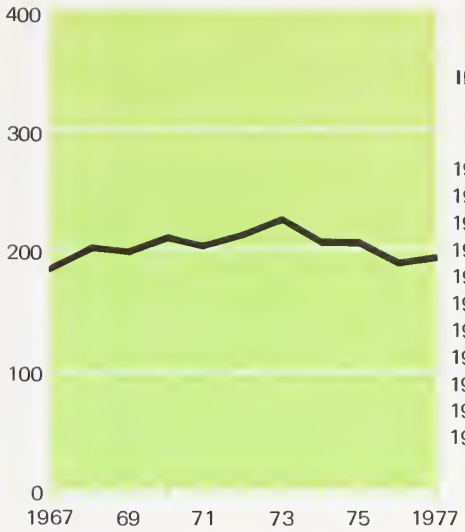
AIRLINE PASSENGERS
millions

1967	34.2
1968	36.8
1969	38.4
1970	37.4
1971	38.0
1972	41.5
1973	42.0
1974	40.1
1975	38.7
1976	41.6
1977	43.2 est.

line sales was alluded to in the previous section, we will only touch upon it here by mentioning that its consumption in 1977 is estimated to have definitely surpassed the previous high level of 1973. The four years between were a decline and gradual recovery from the oil embargo.

Electric energy consumption has gone through similar experience without quite regaining, as yet, its 1973 level. The Tri-State Region is generally using less electricity per person than the nation as a whole, and, ironically, is paying more for it than the nation as a whole.

During the 1970-1976 period the average regional customer increased his use of electricity by 11.6 percent, while the consumption

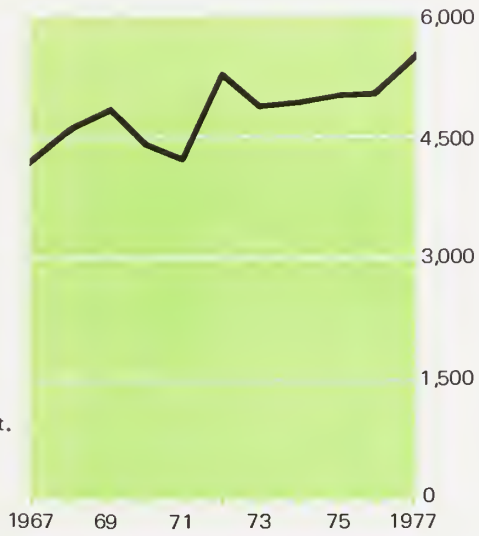


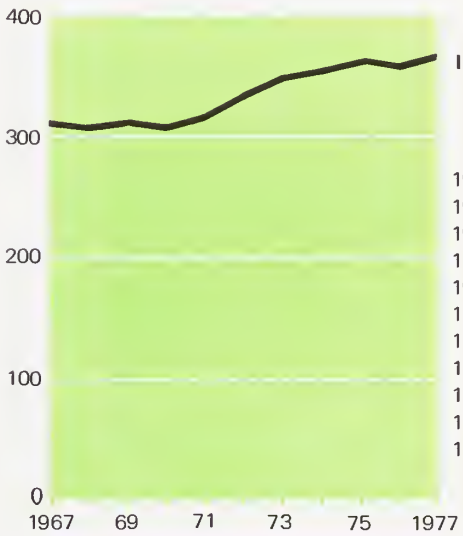
INBOUND FREIGHT
millions of tons
[metric tons]

1967	194	[176]
1968	206	[187]
1969	201	[182]
1970	212	[192]
1971	206	[187]
1972	215	[195]
1973	225	[204]
1974	211	[191]
1975	209	[189]
1976	195	[177]
1977	198	[179] est.

REGISTERED AIRCRAFT
General Aviation

1967	4,250
1968	4,663
1969	4,856
1970	4,405
1971	4,242
1972	5,265
1973	4,850
1974	4,918
1975	5,074
1976	5,100
1977	5,500 est.



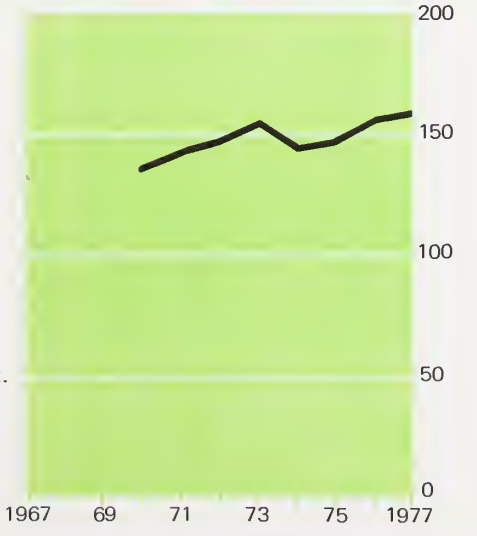


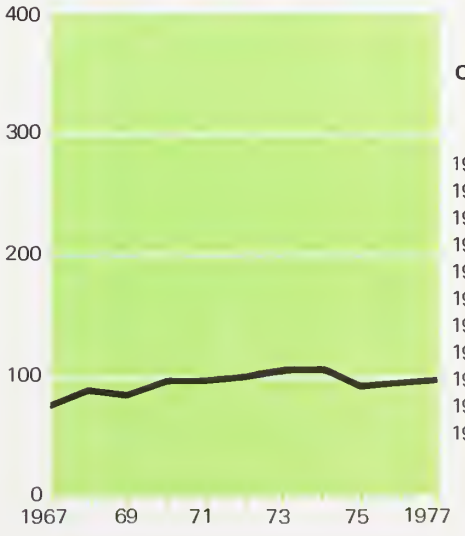
INTERNAL FREIGHT MOVEMENTS
millions of tons
[metric tons]

1967	311	[282]
1968	307	[279]
1969	312	[283]
1970	308	[279]
1971	319	[289]
1972	334	[303]
1973	349	[316]
1974	358	[324]
1975	366	[331]
1976	361	[327]
1977	369	[334] est.

GASOLINE SALES
millions of barrels

1970	136.9
1971	142.6
1972	147.7
1973	153.3
1974	146.4
1975	148.6
1976	153.4
1977	157.1 est.





OUTBOUND FREIGHT
millions of tons
[metric tons]

1967	82	[74]
1968	90	[82]
1969	87	[79]
1970	98	[89]
1971	98	[89]
1972	99	[90]
1973	106	[96]
1974	106	[96]
1975	94	[85]
1976	97	[88]
1977	98	[89] est.

in the whole country rose by 18.3 percent. A regional customer consumed in 1976 one-third less electricity per year than on the national scale. However, the cost of electricity in the Region jumped by 108.5 percent in the last six years, while on the national level the increase amounted to only 64.3 percent.

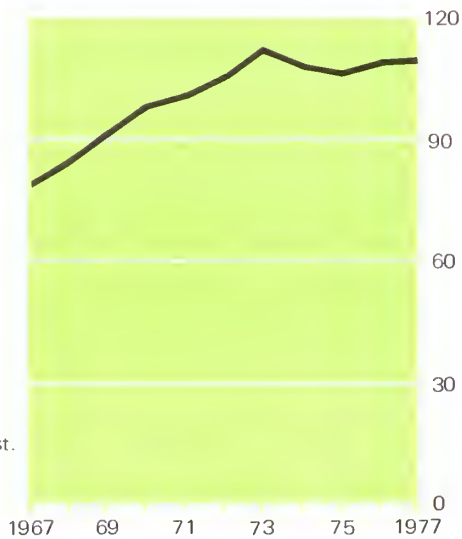
During the 1970-1976 period the regional share, as compared to the whole country, decreased in electric energy sales, number of customers, system peak load and capacity, but increased in operating revenues.

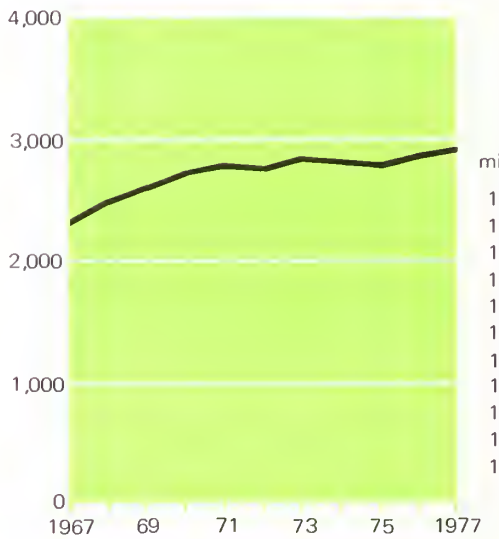
As a prime marketing area of the nation, the New York metropolitan region has been a net importer of goods. Over the years it has rather consistently received twice as much freight as it has shipped. Its recent losses of population and jobs have been accompanied by similar declines in freight movements. Thus, neither inbound nor outbound movements have recovered from the peak year of 1973, although slight upturns are indicated for 1977. If the latter measures are confirmed, freight imports will equal the level of 1967-68 and exports will equal the 1970-71 level.

Internal freight movements exceed the combined amount of tonnage imported and exported. The internal shipments, however, have not remained stagnant, as have imports and exports. This is because businesses and people—even though there are fewer of them—have continued to spread out within this

ELECTRIC ENERGY SALES
Kilowatt-Hours
billions

1967	78.0
1968	84.6
1969	91.3
1970	97.3
1971	101.3
1972	106.4
1973	113.2
1974	108.4
1975	107.6
1976	110.6
1977	111.7 est.



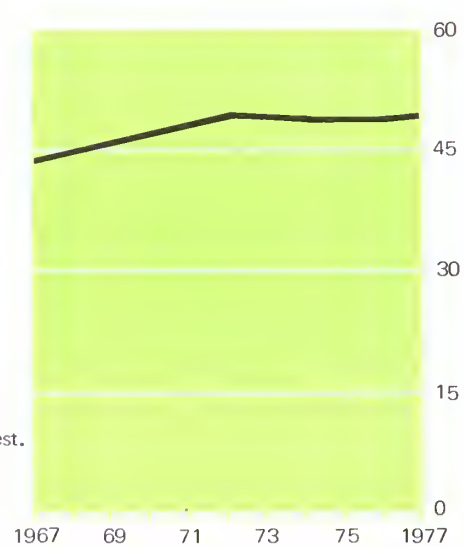


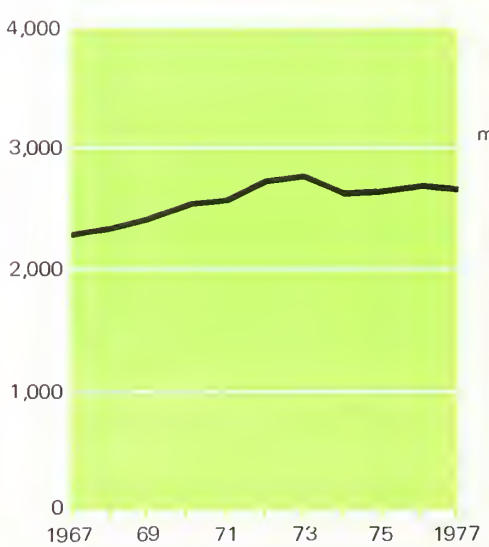
WATER CONSUMPTION
Daily Draw From Public Systems
millions of gallons [liters]

1967	2,320	[8,780]
1968	2,500	[9,460]
1969	2,610	[9,880]
1970	2,770	[10,490]
1971	2,810	[10,640]
1972	2,800	[10,600]
1973	2,870	[10,860]
1974	2,860	[10,810]
1975	2,830	[10,710]
1976	2,880	[10,900]
1977	2,940	[11,110] est.

DAILY REFUSE
thousands of tons [metric tons]

1967	43.5	[39.5]
1968	44.6	[40.5]
1969	45.7	[41.5]
1970	46.8	[42.5]
1971	47.8	[43.4]
1972	48.8	[44.3]
1973	48.6	[44.1]
1974	48.4	[43.9]
1975	48.4	[43.9]
1976	48.4	[43.9]
1977	48.6	[44.1] est.





DAILY FLOW INTO SEWERS
millions of gallons [liters]

1967	2,260	[8,550]
1968	2,310	[8,740]
1969	2,420	[9,160]
1970	2,550	[9,650]
1971	2,570	[9,730]
1972	2,740	[10,370]
1973	2,800	[10,600]
1974	2,640	[9,990]
1975	2,660	[10,080]
1976	2,700	[10,220]
1977	2,650	[10,050] est.

large metropolitan area. If the tendency to spread can be "bent" in accordance with current Tri-State plans, the pressure for internal freight shipments, which tend to raise sharply the cost of delivered goods because of their typically small size, will be eased.

One of the benefits of less population is reduced consumption of water, and this has been the case in the Tri-State Region. The rate of increase in the late 1960s was 10 percent annually. The rate of increase in the late 1970s is 2 percent. The effect of population loss on resultant sewage flow is even more pronounced. Today's average daily flow is 5 percent lower than that of the average day in the peak year of 1973. Both the water and sewage measures are for volumes that are piped through public lines. There are, in addition to these, undetermined amounts of water drawn from private wells and, even more so, discharged as waste water into private septic systems.

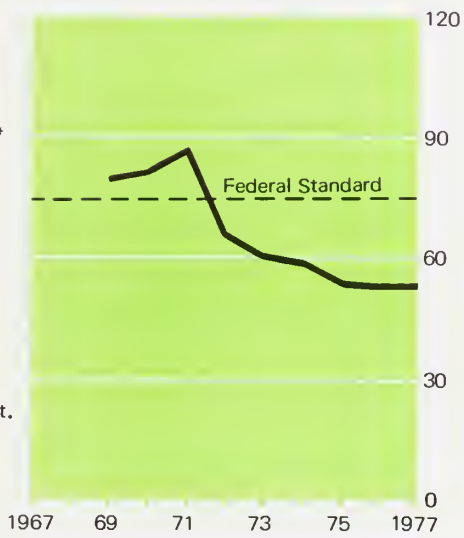
A fairly level amount of solid waste has been generated by the Region on the average weekday during the last five years. Again, the loss of population has tended to keep down the number of tons thrown out each day, even though the amount generated per capita has been slightly on the rise over the years.

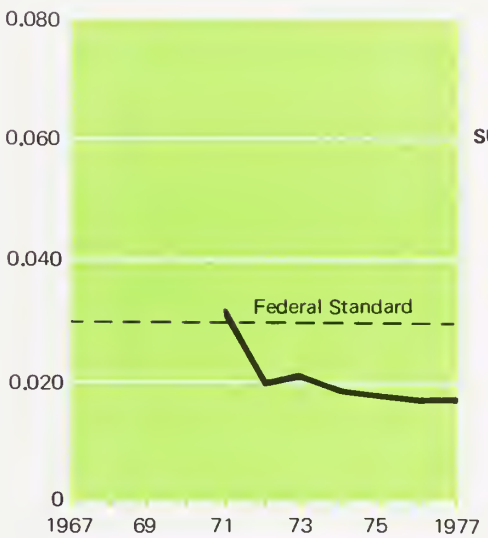
Air Quality

The absence of statistically valid methods for measuring the Tri-State Region's air

SUSPENDED PARTICULATES
Average Micrograms* per cubic meter

1969	79.4
1970	82.2
1971	87.5
1972	65.8
1973	60.1
1974	59.4
1975	54.1
1976	54.0
1977	54.0 est.



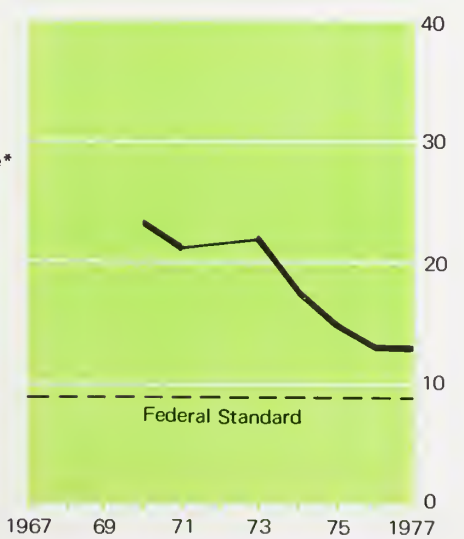


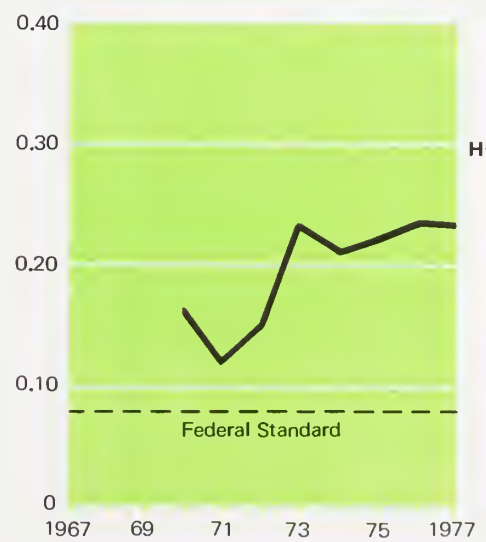
SULFUR DIOXIDE
Annual Average*
parts per million

1971	0.032
1972	0.020
1973	0.021
1974	0.019
1975	0.018
1976	0.017
1977	0.017 est.

CARBON MONOXIDE
Highest 8-Hour Average*
parts per million

1970	23
1971	21
1972	
1973	22
1974	18
1975	15
1976	13
1977	13 est.





OZONE
Highest 1-Hour Average*
parts per million

1970	0.16
1971	0.12
1972	0.15
1973	0.23
1974	0.21
1975	0.22
1976	0.23
1977	0.23 est.

*At arbitrarily selected sites.

quality makes statements about that quality somewhat speculative. Nonetheless, the Region's air is considered better for the health of its citizens as we approach the late 1970s in comparison to the late 1960s. This is principally because of reductions, observed at monitoring sites, in sulfur dioxide and suspended-particulate concentrations to levels, which, in general, are better than federal standards. The Region's four largest cities conform to this regional trend, although they do not exceed the federal standards as much as the entire Region does.

But the cities have, since 1970, succeeded in removing more of the particulates from their atmospheres, and as much of the sulfur dioxide, compared to the entire Region. Further, both cities and Region have outperformed the nation in this respect, according to the measures available. The percentage reductions from 1970 to 1976 are:

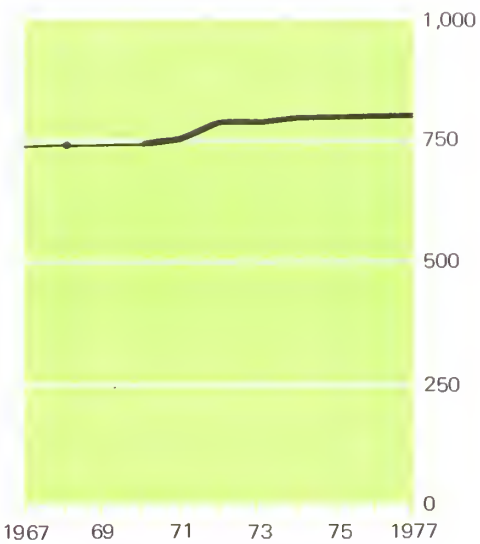
	Sulfur dioxide	Particulates
	Percent	
Four largest cities	46	51
Tri-State Region	46	38
United States	27	12

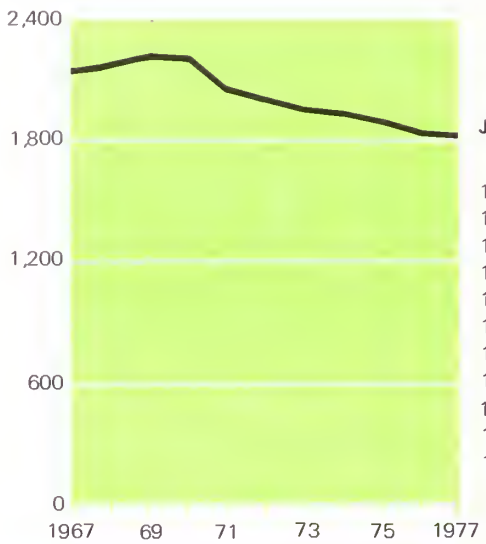
Another of the major pollutants—carbon monoxide—also appears to have been reduced, although the federal standard has not been attained. It will take considerable effort in time and cost to "go the last mile" in reaching this standard, especially in the auto-filled central cities.

Ozone is one pollutant that has resisted

MANHATTAN FLOOR SPACE
Square Feet [Square Meters] Below 60th St.
millions

1968	742	[68.9]
1970	744	[69.1]
1971	760	[70.6]
1972	785	[73.0]
1973	788	[73.2]
1974	793	[73.7]
1975	795	[73.9]
1976	797	[74.0]
1977	799	[74.2] est.



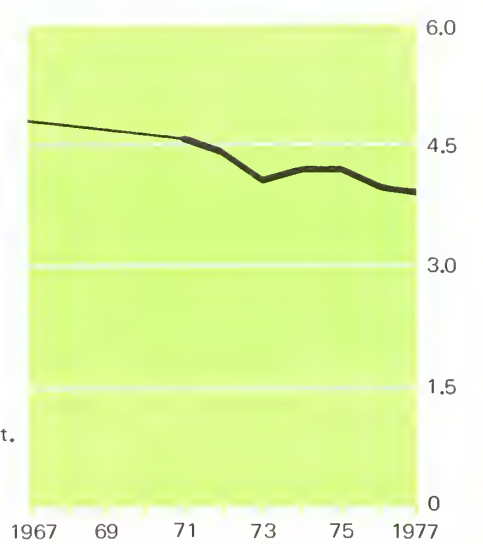


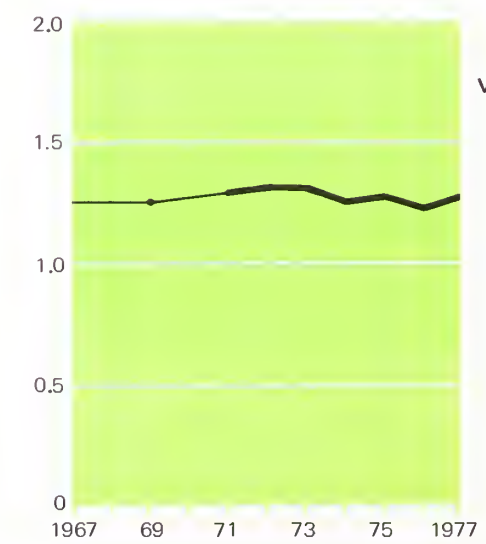
MANHATTAN EMPLOYMENT
Jobs Below 60th St.
thousands

1967	2,146
1968	2,171
1969	2,230
1970	2,201
1971	2,064
1972	2,009
1973	1,964
1974	1,920
1975	1,870
1976	1,820
1977	1,812 est.

TRANSIT TRAVEL to MANHATTAN
Persons Entering and Leaving Below 60th St.
millions

1971	4.52
1972	4.39
1973	4.11
1974	4.19
1975	4.20
1976	4.00
1977	3.90 est.





VEHICLE TRAVEL to MANHATTAN
Vehicles Entering and Leaving Below 60th St.
millions

1969	1.26
1971	1.29
1972	1.31
1973	1.31
1974	1.25
1975	1.26
1976	1.23
1977	1.26 est.

the Region's attempts to control it. Rather than decreasing, it is exceeding the federal standards, according to some measures, by a growing amount as the years go by. At this point, the early 1970s stand out as the years when we were closest to attainment of the national goal.

Because air is such an amorphous substance, the regional measures reported here—even the measures in the four cities—cannot always represent all of our neighborhoods. The averages tend to cancel extremes that are measured from place to place.

Manhattan

The southern half of Manhattan Island from 60th Street to the Battery is *the* central business district of the Tri-State Region and, in many respects, the central business district of the nation. The indices of activity there have a very practical meaning for the Tri-State regional development plan, which seeks to revitalize the Region's older cities, and a very symbolic significance for the health of the nation's older cities in general.

The steady but small increases of floor space in Manhattan attest to the basic regenerative force that exists in the business district. With employment in continued decline, however, a strong, dedicated effort will be necessary to maintain any momentum for renovation and rebuilding. For the sake of regional efficiency, Manhattan employment should, at the least, be kept at its present level; it should turn upward, according to the Commission's targets for planned growth, until it regains about half the jobs it has lost since the peak year of 1969.

The declining employment situation in Manhattan is the principal reason for a lessened amount of travel there. The effect of this on trips made by public transit, which had been at a fairly stable level prior to the 1969 peak in employment, has been registered directly and consistently. The effect on vehicular travel, which had been rising slightly, took longer to register, since vehicular travel is only one-quarter of the amount of trips made to Manhattan by mass-transportation, and many of the vehicular trips go through the central business district without stopping. At this point travel by vehicle to Manhattan stands at the 1969 level.

Much that occurs in the Tri-State Region is a response to national or international conditions. There are many social and economic indicators, however, that are affected largely by internal actions, and we have already mentioned in some passages of this report that some regional trends are not conforming with regional plans. The Commission has recently revised and updated its plans for land use and housing, and its plan for transportation will be similarly updated this year. The Commission intends to advocate its plans, and, to the extent that the plans are popularly accepted, more indices of economic and social trends will begin to reflect what is desired for this metropolitan region.

The data in *Metromonitor* are based on considerable research and analysis, some of which is documented in detail in the following staff reports on file in the Commission's library:

Population and Vital Statistics, May 1977 (ITR 1202)
1976 Land-Use Statistics: Change Between 1970 and 1976, October 1977 (ITR 1203)
Hub-Bound Travel 1976, March 1978 (ITRs 1205 and 1206)
Public Transportation Operational and Financial Statistics, June 1977 (ITR 1206)
1974 and 1975 Open Space Recreation Acquisitions in the Tri-State Region, January 1978 (ITR 1208)
1976-1977 Housing Changes in the Tri-State Region, February 1978 (ITR 1210)
Ambient Air Quality Data, May 1977 (ITR 1211)
Solid Waste Monitoring, August 1977 (ITR 1214)
Historical Trends in Electric Energy and Fossil Fuels, December 1977 (ITR 1215)
Freight Monitoring, June 1977 (ITR 1215)

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